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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER	
HARTMAN JR, RONALD D	

ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/824,462	KAMIHIRA, ICHIKAI	
	Examiner	Art Unit	
	Ronald D Hartman Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-57* is/are pending in the application.

4a) Of the above claim(s) *1-4,8-16 and 24-57* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5-7 and 17-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *05/23/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-4, 8-16 and 24-57 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention(s), there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 8/2/2004.

2. Claims 5-7 and 17-23 are therefore currently presented for examination.

Claim Objections

3. Claim 6, line 2, "the ratio" lacks proper antecedent basis.

Claim 19, lines 2-3, "the operation data" lacks antecedent basis.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5-6 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Nomoto et al., U.S Patent No. 4,864,490.

As per claims 5 and 17, Nomoto teaches a characteristic control device (i.e. controller; Figure 1 element 2) which is provided with:

- a control module (i.e. Figure 1 element 11) which controls the characteristics of control parameters and which is provided separately from a control device (i.e. Figure 1 element 4);
- a control device (i.e. Figure 1 element 4) which is provided with a basic control module which determines the amount of control used to control a control subject (i.e. Figure 1 element 3) based on predetermined input

data (i.e. Figure 1 element 1) and control parameters (i.e. Figure 1 elements K_c, T_I and T_D) which relates the input data to, and the output data from, the control subject;

- a characteristic storage mechanism (i.e. Figure 1 element 9) which stores the basic control parameters; and
- a characteristic automatic modification mechanism which determines and automatically modifies the control parameters which are applied to the basic control module, based on the basic control parameters stored in the storage mechanism and the predetermined input data (i.e. Figure 1 elements 8 and 10 and C5 L25-30).

As per claim 17, Nomoto further teaches the characteristic control device being provided with a characteristic generation mechanism for generating basic control parameters that serve as the basis of the control parameters, in accordance with predetermined evaluation standards (i.e. Figure 1 element 8).

As per claim 6, Nomoto teaches the use of fuzzy rules for automatically modifying the control parameters applied to the basic control module (i.e. Figure 1 element 9; "reasoning rules" contained in memory). Furthermore, the system of Nomoto possesses the capability to use "a ratio", in reference to calculations, for the purpose of providing the control parameters.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nomoto, as applied to claims 5 and 17 above, in view of Someya et al., U.S. Patent No. 5,267,348.

As per claims 7 and 18, Nomoto does not specifically teach a user interface used for manipulating the fuzzy rules and or the control parameters.

Someya et al. teaches a method and system for evaluating and modifying fuzzy knowledge wherein a user interface (i.e. Figure 22 element 2205) is used to perform the modifications (i.e. Figure 22 elements 2203-2205), and since the modification of the fuzzy rules will modify the control parameters, both are sufficiently taught by way of Someya's disclosed system.

It would have been obvious to one of ordinary skill in the art to have incorporated the teachings of Someya into the teachings of Nomoto so as to allow for a simple way of modifying the control rules to that the control rules may be tailored for specific situations based on the needs and desires of the user and or the system being controlled, and this would have been obvious to one of ordinary skill in the art at the time the invention was made.

As per claim 19, Nomoto's combined system (Nomoto in view of Someya) further teaches an evolutionary calculation method to generate basic control parameters (Note: The Examiner has interpreted "evolutionary" simply to mean a calculation that is able to adapt.; See Nomoto; Abstract; "auto-tuning").

As per claim 20, Nomotos' combined system teaches the use of a display for displaying characteristics of the control parameters (i.e. See Someya, Figures 20-22). Furthermore, the system of Nomoto possesses the capability to use "a ratio", in reference to calculations, for the purpose of providing the control parameters.

7. Claims 22-23, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nomoto, as applied to claim 17 above, in view of "Official Notice".

As per claim 22, the rejection of claim 17, from above, is applied equally herein. "Official Notice" is taken with respect to a control device being a computer since this is a feature that was extremely well known in the art at the time the invention was made for allowing complex calculations, that would otherwise be too cumbersome for a human operator, to take place very quickly.

As per claim 23, a communication mechanism is also extremely well known within the confines of computer architecture and since the incorporation of a computer would have been obvious for at least the reasons set forth above, with respect to claim 22, a communication mechanism would be equally obvious in order for different parts of the computer system to communicate with another effectively and efficiently.

Therefore, for at least the aforementioned reasons, "Official Notice" is taken with respect to control device being a computer and the computer utilizing a communication mechanism (claims 22-23) since they both represent features and or limitations that were well known in the art at the time the invention was made.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nomoto's combined system, in view of Motomiya, U.S. Patent No. 4,639,852.

The rejections of claims 17 and 22-23, from above, are applied equally herein.

Furthermore, as per claim 21, Nomoto's combined system does not specifically teach an attachable and detachable feature wherein the characteristic control device may be connected and disconnected from a control device.

Motomiya teaches a characteristic control device (i.e. computer) which may be connected and disconnected from a control device (i.e. controller)(i.e. C5 L6-16).

It would have been obvious to have included the functions disclosed by Motomiya into the combined system of Nomoto for the purpose of allowing a controller to be selectively controlled which would aid Nomoto's combined system by providing for a means of connecting and disconnecting a supervisory mechanism (i.e. computer) so that if the controlled system is not functioning correctly, modification may be made to the rules that govern the system by using the supervisory system and then allowing for the supervisory to disconnect when the system has been brought back to acceptable

operational levels, and this would form a more effective means of controlling the system so as to account for any unforeseen complications arising during the actual control of the process or system being controlled, and this would have been obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald D Hartman Jr. whose telephone number is 703-308-7001. The examiner can normally be reached on Mon. - Fri., 11:30 am - 8:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronald D Hartman Jr.
Examiner
Art Unit 2121

Anthony Knight
Supervisory Patent Examiner
Group 3600